

REMARKS

Applicants' attorney is appreciative of the interview granted by the Examiner on January 25, 2006. At that interview, a demonstration and further evidence were presented, concerning how tailored fiber placement can be used to form grids having nodes of constant fiber volume and thickness.

In accordance with the discussion at the interview, a new set of Claims 48 through 59 has been added. Claim 48 is directed to a method for producing a self-supporting fiber composite grid component in which the integral fiber preform is obtained by tailored fiber placement but in which there is no limitation as to the thickness or fiber volume of the node points. Claims 49 through 51 depend from Claim 48.

New Claim 52 is directed to the self-supporting fiber composite grid itself, and which does include at least one intersection or node point having substantially constant material thickness and substantially constant fiber volume content. Claims 53 through 59 depend from Claim 52.

Claims 24 through 32 and 34 through 46 have been rejected under 35 USC 112, first paragraph, as failing to comply with the enablement requirement. This rejection was discussed in detail at the interview, and it was shown how utilizing tailored fiber placement, a well known method, it is possible to place fibers in such a manner that the node points of a grid would have constant volume and thickness, and that such a placement would be clear to one of ordinary skill in the art having motivation to produce such a grid.

Withdrawal of this rejection is requested.

Claims 24 through 32 and 34 through 36 have also been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement in the

recitation of the grid as being "self-supporting." This rejection relates to the use of the base material and the Office action states that the grid formed is not self-supporting unless one considers the base fabric material be part of the grid. Applicants disagree with this interpretation of the claims. In fact, the specification makes quite clear on page 1 that the grid-like structures which are produced according to the invention must be resistant to high temperatures and have high mechanical strength, and that carbon fiber reinforced carbon grates have proven themselves for this purpose and may be prepared from plate material by cutting. Grates of metal high temperature alloys made by casting are also known.

Thus, the object of the invention must be a grate suitable for high temperature furnaces having high strength. By implication, such a material must be rigid, suitable for holding objects to be treated. This is what is meant by "self-supporting" in the claims, as opposed to a merely flexible fiber grid which is used as a support for a rigid material, known in the prior art. A sample of such a grid according the invention was shown to the Examiner during the interview.

Withdrawal of this rejection is requested.

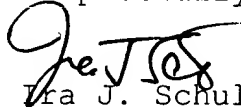
Regarding the prior art rejections, Applicants repeat the comments made in the previous responses, and note that while tailored fiber placement is known, it has not been known to utilize this technique to produce grids for high temperature furnaces, as is done according to the invention. Because it is important that such grids be non-warping and flat, they have previously been produced by cutting sections out of sheet material, resulting in substantial waste. The use of tailored fiber placement greatly reduces the material cost, as it is

now possible to use only as much fiber as is necessary to form the grid, eliminating the cut-out waste.

Withdrawal of the rejections of record is requested.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



Ira J. Schultz

Registration No. 28666